

DS-2

Mid-Bass
Loudspeaker



— 24
— 21
—
— 18
—
— 15
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— 12
—
— 9
—
— 6
—
— 3
—
— 0
Inches

The DS-2 is a high-power, arrayable mid-bass unit designed to supplement Meyer Sound MSL-3 and MSL-10A loudspeaker systems in the 50-160 Hz range. Optimized to perform in a wide range of large-scale sound reinforcement applications, the DS-2 delivers high sound pressure levels with extremely low distortion and offers exceptionally controlled directivity.

The system utilizes two proprietary 15-inch cone drivers in a folded horn enclosure braced with steel vertical reinforcing rods. The horn features a hyperbolic flare for maximum energy transfer with minimum frequency response ripple. Its balanced compression chamber presents a

symmetrical load to the drivers, providing very high power handling. The rugged, multiple-ply hardwood cabinet is fitted with handles and, optionally, aircraft-style rigging pan fittings.

The DS-2 requires a high-quality professional power amplifier capable of delivering 600 watts continuously into 4 ohms with a signal voltage gain of 10 dB (minimum) to 32 dB (maximum), and can accommodate up to 2500 watts burst power.

Features

High power

Flat frequency response

Arrayable

Rugged

Long-term reliability

Applications

Main PA arrays

Concert reinforcement

Theater sound reinforcement

Live music clubs systems

M E Y E R S O U N D



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DS-2 Specifications

Acoustical – DS-2 / D-2 System¹

Frequency response ²	50-160 Hz ±3 dB
Maximum SPL ³	
Continuous	136 dB
Peak	148 dB
Sensitivity ⁴	112 dB
Coverage (-6dB points)	
Horizontal	120 degrees
Vertical	120 degrees

DS-2 Loudspeaker

Transducers	(2) MS-15 15-inch cone driver
Impedance	
Nominal	4 ohms
Minimum	3.5 ohms real part, 0 ohms imaginary part, at 80 Hz
Maximum Safe Amplifier Swing	140 Vpk
Enclosure	Folded horn, multi-ply Finnish birch
Finish	Black textured or charcoal-grey carpet (optional)
Physical Dimensions	21 1/4" W x 56 3/4" H x 30" D
Weight	250 lbs (113.6 kg)
Protective Grill	Expanded metal screen frame, vinyl damped, charcoal-grey foam covering
Connector	Cannon EP-4 male, EP-5 male (Europe only)
Rigging	Aircraft pan fittings

D-2 Control Electronic Unit

Input Type ⁵	Balanced ISO-Input [™] , 10k ohms, 5k ohms per leg
Output Type	Active push-pull, 300 ohms output impedance
Maximum Input Level	
Balanced	+21 dBu
Unbalanced	+21 dBu
Maximum Output Level	
Balanced	+26 dBu
Unbalanced	+20 dBu
Hum and Noise ⁶	<-90 dBV
Dynamic Range ⁷	120 dB
Sense Inputs	100k ohms true differential, opto-isolated
Crossover Frequency	
Upper	160 Hz
Lower (Mode switch in "DS-2 & Sub" position)	65 Hz
Driver Protection Circuitry	RMS limiter, true excursion limiter
Indicators	
Sense/Amplifier Gain Detect	Green/Red LED
RMS Limiter, Excursion Limiter	Red LEDs
Power Supply	Green LED
Controls	
Front Panel	Input attenuator, AC power switch
Preset Panel	Mode switch, sub polarity switch, DS-2 power control
Rear Panel	Ground lift switch, AC range switches
Connectors	
Balanced Input/Output	3-pin XLR (A-3) female/male (front panel input optional)
Sense Inputs	Banana jacks (4 dual)
Power	100-120/200-240V AC, 50/60 Hz (rear-panel switchable)
Physical Dimensions	19" W x 1 3/4" H x 7 3/4" D, standard rack mount
Weight	8 lbs. (3.6 kg)

Note 1:

Acoustical specifications are for the minimum configuration of two DS-2 cabinets, and are measured on axis at 2 meters from 1/R image (located at cabinet rear).

Note 2:

Half-space conditions, pink noise input, in third-octave bands.

Note 3:

Loudspeaker driven with "A"-weighted noise (peak-to-RMS ratio ≈ 12 dB), with amplifier rated at 600 W/channel at 4 ohms. The DS-2 will accommodate amplifiers capable of peak output levels up to ±140 Vpk.

Note 4:

Loudspeaker driven at 2 vrms (1 watt @ 4 ohms).

Note 5:

ISO[™] Input: Pins 1, 2 and 3 are transformer-isolated, and shell is connected to chassis/AC earth ground. Pin 3 positive for positive pressure output.

Note 6:

"A"-weighted, unbalanced.

Note 7:

"A"-weighted noise floor to maximum output.

D-2 Control Electronics Unit



The DS-2 loudspeaker operates as a system with the D-2 Control Electronics Unit (one per channel). Optimized for the DS-2 and pre-aligned at the factory, the D-2 contains active crossover networks, frequency response and phase response alignment circuitry, and Meyer Sound's exclusive SpeakerSense™ driver protection circuitry, incorporating peak and RMS signal limiting as well as excursion protection. A single-channel device operating at line level, the D-2 is intended to be the final component in the signal chain before the power amplifier.

The D-2 SpeakerSense circuitry protects the DS-2 loudspeaker components from damage due to overheating or excessive excursion under high power conditions. This unique circuit continuously monitors the power applied to the DS-2 drivers, and limits the signal output when the safe operating areas of the drivers are exceeded. Until the onset of overload, the SpeakerSense circuitry has no effect on the signal.

The D-2 SpeakerSense circuit incorporates Meyer Sound's new MultiSense™ function, which allows the use of multiple power amplifiers having different channel gains and/or power ratings. The D-2 accommodates up to four amplifiers, and provides separate Sense inputs for each. Its MultiSense circuit, which implements an

analog OR condition, automatically tracks the power amplifier with the greatest output voltage swing to control the system protection limiters.

Also provided is a switch-defeatable crossover (Mode switch) and line-level output to drive subwoofer systems, with a sub polarity switch to facilitate aligning the subwoofers with the main system. The sub switches and other setup controls are located behind a cover plate on the D-2 front panel, providing a means for securing the system installer's presets.

The mid-bass loudspeaker system shall be of the folded-horn type with two 15" cone loudspeakers in symmetrical compression chambers. The drivers shall be securely mounted in the trapezoidal hard-wood-plywood enclosure, and the loudspeaker shall operate with a companion Control Electronics Unit.

The Control Electronics Unit shall contain a power supply capable of operating from a 100-120/200-240V AC, 50/60 Hz line, electronic crossover circuitry, RMS limiters which protect the speakers from overheating, true excursion limiters to protect the speakers from excessive excursion, equalization circuitry, active balanced input, indicator LED's for power on and limiters. A separate, switch-defeatable subwoofer output having switchable polarity shall be provided. Total harmonic distortion shall be less than 0.1%. The protection limiters shall be controlled by sensing connections to the power amplifier output, and the Control Electronics Unit shall accommodate four separate amplifiers having dif-

ferring gains and/or power ratings, with analog OR circuitry to track the amplifier with greatest output swing. "A" weighted noise level shall be at least 90 dB below maximum rated output of +26 dBu.

Two speaker systems, when combined with the Control Electronics Unit and a power amplifier rated at 600 watts into 4ohms, shall meet the following criteria: Frequency response, 50 to 160 Hz plus or minus 3 dB measured with $\frac{1}{3}$ octave noise, 136 dB SPL of continuous pink noise output at 1 meter and peaks of 148 dB SPL.

Speaker enclosure dimensions shall be 21 $\frac{1}{4}$ " W x 56 $\frac{3}{4}$ " H x 30" D, weight 250 lbs (113.6 kg).

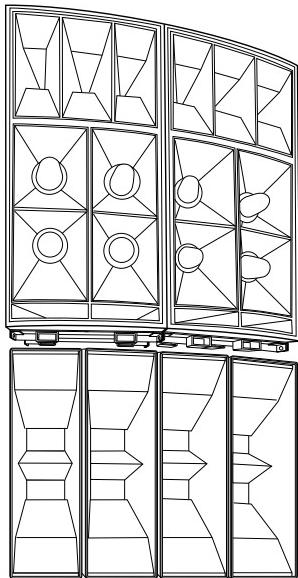
Control Electronics Unit dimensions shall be 19" W x 1 $\frac{3}{4}$ " H x 7 $\frac{3}{4}$ " D, weight 8 lbs (3.6 kg).

The horn loudspeaker system shall be the Meyer Sound DS-2. The Control Electronics Unit shall be the Meyer Sound D-2.

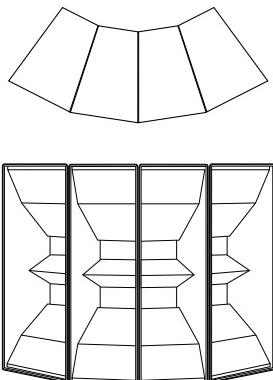
Meyer Sound Laboratories has devoted itself to designing, manufacturing, and refining components that deliver superb sonic reproduction. Every part of every component designed and built to exacting specifications and undergoes rigorous, comprehensive testing in the laboratories.

Research remains an integral, driving force behind all production. Meyer strives for sound quality that is predictable and neutral over an extended lifetime and across an extended range.

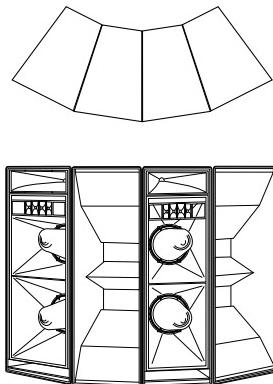
Arraying Examples



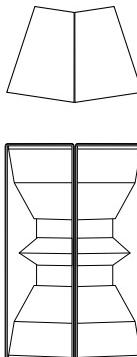
Arrayed with MSL-10A



Block of Four Units



Arrayed with MSL-3



Minimum Configuration